

### Claims

1. Cylinder sleeve for an internal combustion engine, the outer surface of which has at least one roughened region (27, 28, 38 to 43, 54, 54', 61) reaching over its entire axial length, and at least one engagement segment having at least one projection having at least one undercut, at least in its lower region, facing the crankcase, **characterized in that** the cylinder sleeve is configured as a rough-cast sleeve, the outer surface of which has a roughened region reaching over its entire axial length and consisting of a plurality of elevations (11, 12) with undercuts (13, 14).
2. Cylinder sleeve according to claim 1, **characterized in that** the height of the elevations (11, 12) amounts to 0.2 mm to 2 mm.
3. Cylinder sleeve (15, 29, 35) according to claim 1 or 2, **characterized by** an outer contour that is elliptical in cross-section.
4. Cylinder sleeve (16, 30, 36) according to claim 1 or 2, **characterized by** an outer contour that consists, in cross-

section, of four arc-shaped segments (21 to 24) that are approximately the same size.

5. Cylinder sleeve (17, 31, 37) according to claim 1 or 2, **characterized by** an outer contour that consists, in cross-section, of two arc-shaped segments (25, 26) that lie opposite one another, and two flat segments (27, 28) that lie opposite one another.
6. Cylinder sleeve according to claim 3 to 5, **characterized in that** the outer shape of the cylinder sleeve is formed by means of a sleeve wall thickness that varies over the circumference, at a constant depth of the roughened region.
7. Cylinder sleeve according to claim 3 to 5, **characterized in that** the outer shape of the cylinder sleeve is formed by a depth of the roughened region that varies over the circumference, at a constant sleeve wall thickness.
8. Cylinder sleeve according to one of the preceding claims, **characterized in that** the at least one flattened region is provided with a step (53) having a flattened region (54)

lying radially on the outside, on its lower side facing the crankcase.

9. Cylinder sleeve according to one of the preceding claims, **characterized in that** it consists of cast iron and is produced using the spin casting method.
10. Cylinder sleeve according to claim 1 to 8, **characterized in that** it consists of an aluminum-silicon alloy.
11. Cylinder sleeve according to claim 10, **characterized in that** it is produced using the gravity casting method.
12. Cylinder sleeve according to claim 10, **characterized in that** it is produced using the spin casting method.
13. Cylinder sleeve according to claim 10, **characterized in that** it is produced using the lost-foam casting method.
14. Cylinder sleeve according to claim 1 to 8, **characterized in that** it consists of a sintered metal.